The inferred impact of professionalism and PSM on decision making

Abstract

The most dominant view on professionalism is a sociological perspective. Central to this perspective is the idea that the pure belongingness to a certain occupation implies behavioral consequences. In practice, however, we see that individuals with the same occupation background behave differently. This study seeks to explain why the behavior of professionals varies by referring to identity theory and addressing professionalism as professional role identity; the perception of how individuals interpret their professional role. Using survey data, this research investigates the impact of public service motivation (PSM) and professionalism on decision making of veterinarian inspectors working for the Dutch Food and Product Safety Authority. The results support the hypothesis that decision making is influenced by the way veterinarian inspectors interpret their professional role. In contrast, PSM seems to have neither a direct nor a moderating effect on decision making.

Keywords: PSM, professionalism, identity theory, decision making

INTRODUCTION

For many years, sociologists have studied professionals resulting in one dominant view on professionalism, *the sociology of professionalism*. From this point of view, professionalism is perceived as the degree of specialized, theoretical knowledge and socialized, professional norms and values applied to specific cases in an institutionalized way (Abbott 1988, Elliott 1972, Freidson 2001). An additional crucial aspect of professionalism is the concept of autonomy or discretion[1] which results from the application of specified theoretical knowledge (Freidson 1994, Steen and Van der Meer 2011, Rainey 2003, Evetts 2003). Professionalism is commonly seen as strong determinant of behavior (e.g., Andersen 2009; Goodrick). Through professional socialization - for instance by means of shared educational backgrounds, professional trainings, membership of professional associations - professionals take in certain values and develop a shared professional identity (Evetts 2003, Evetts 2006). Resulting from this shared identity, it is assumed that professionals develop similar work practices and procedures, shared ways of perceiving problems and their appropriate solutions, and common ways of dealing with customers and clients. In other words, it is assumed that pure belonging to a certain occupation has behavioral consequences.

In practice, however, we see that individuals with the same professional background behave differently. Some medical doctors may be very loyal to individual clients while others may think more in terms of helping the public at large. Following others, we argue that these differences in behavior are related to differences in the way individuals interpret their professional role. For example, De Graaf (2003) points out that there is no overriding way of conceptualizing one's role as veterinarian, banker, or charity worker, but the chosen perspective is context and individual dependent. Clouder (2003) shows that occupational therapy students perceive the profession occupational therapy itself differently, suggesting that this occupation implies more than one ideal professional role. Therefore, we point out the necessity to approach professionalism at an individual level. Rather than addressing professionalism at an occupational level we refer to identity theory and address professionalism as *professional role identity*; the perception of how individuals interpret their professional role.

[1] Within public administration, 'a public officer has discretion whenever the effective limits on his power leave him free to make a choice among possible course of action or interaction' (Davis 1969:4)

Another concept which has been identified as relevant drive for behavior of civil servants is *public service motivation* (PSM) (Andersen and Serritzlew 2012; Brewer 2004; Brewer 2008; Vandenabeele, Scheepers and Hondeghem 2006; Perry 2000). PSM can be refered to as the motives and actions, grounded in public institutions, which are intended to benefit others and shape their well-being (Perry and Hondeghem 2008).

This study aims to increase our knowledge of the inferred effect of professionalism - readdressed as professional role identity - and PSM on actual decision making. By doing so we contribute to the literature on professionlism and to the current discussion on the interrelatedness of PSM and professionalism (e.g., Anderse 2009; Andersen and Pedersen 2012; Lipskey 1990; Maynard-Moody and Musheno 2000; Moynihan and Pandey 2007). Empirical knowledge contributes to the debate on how professional make use of their autonomy by providing evidence of the effect of PSM and professionalism on decision making in hypothetical real life situations.

This article consists of five sections. Firstly, we introduce professionalism and PSM and point out several limitations in current literature. Secondly, we provide an introduction to our case; veterinarian inspectors (N=258) working for the Dutch Food and Product Safety Authority. After describing data and methods, we present our results, discuss our findings and, finally, conclusions are drawn.

1. THEORETICAL FRAMWORK

Professionalism

In the sociology of professionalism, professionalism is addressed at the occupational level (e.g., Evetts 2003; Freidson 2001). Central to this approach is the idea that professionals develop similar work practices and procedures, shared ways of perceiving problems and their appropriate solutions, and common ways of dealing with customers and clients. In other words, it is assumed that the belongingness to a certain occupation has behavioral consequences (Andersen 2009). As mentioned above, autonomy is a cruical aspct of the work of professionals. Often supervisors do not hold the same profession as the professionals they monitor. Being non-experts, they do not possess the (theoretical) knowledge of professionals. Accordingly, they are unable to evaluate whether the members of a certain occupation did the

most appropriate thing within a given situation or not (Roberts and Dietrich 1999). This is one of the reasons why the information about the quality of the services or products is asymmetric and - more importantly - like Gulick (1933, 61) puts it 'it is impossible to analyze the work of any public employee from the time he (or she) steps into the office in the morning until he (or she) leaves at night without discovering that his (or her) act is a seamless web of discretion and action'. In other words, there will always be situations where professionals have discretionary room available.

Research approaching professionalism at the individual level, however, shows that the behavior of professionals is influenced by more than just one set of overreaching occupational norms. The personal interpretation that individuals bring to their professional role matter as well. For example, Bucher and Selling (1977) point out that not all psychiatrists have the same ideas about their field and how one should act as a professional; nor do all of them share believes about the efficiency of competing treatments or therapeutic approaches. Gould and Harris (1996) found that despite of identifying with general traits such as 'caring people', social workers indicate that they are 'not tied to any particular image' (p. 229). In an qualitative study, Schott, Steen en Van Kleef found evidence some veterinarian inspectors are very stict in applying ruels and regualation while others sensitives to the needs of the individuals being inspected. According to De Graaf (2003), there seems to be no overriding way of conceptualizing one's role as veterinarians, bankers, or charity workers, but the chosen discourse[2] is context- and individual dependent. More recently (2010), the author identified four different types of public top administrators (by-the-book professionals, society's neutral servants, personally grounded servants, and open and principled independent) depending on the way they weigh their loyalties to their different masters (elected official, colleagues, the public good, moral imperatives, the law, and the organization's clients). These typologies of public professionals matter because they have behavioral implications.

What follows from this is that the predictive power of professionalism concerning behavior is less strong than initially presumed. It is not clear from being a professional solely how one interprets his/her professional role and, related to this, which loyalties one is

[2] Hajer (1995: 44) defines a discourse as 'a specific ensemble of ideas, concepts and categorizations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to social and physical reality'.

addressing. Thus, the sociological concept of professionalism, as commonly used in literature, is vague is the sense that its actual meaning is ambiguous and its behavioral effects cannot be explained sufficiently by mechanisms of professional socialization. In order to investigate the impact of professionalism on behavior a more individualized conceptualization of professionalism is needed; namely a conceptualization that takes into account the individual interpretations of cultural expectations tied to a (professional) role. Such an individual conceptualization goes beyond the idea of professional socialization implying that all professionals within a certain occupation develop a shared professional identity and act consistent with it.

In this study, identity theory is suggested as a theory which can explain why individuals with the same occupational background show varing behavior in practice. Identity theory offers a line of reasoning for behavior by making use of the context and the self as explanatory variables. The self is seen as a multi-dimensional construct consisting of a collection of *role identities*; each of which is based on the occupation of a particular role in social intercourse (Stryker and Burke 2000). For example, an individual may occupy the role of being a parent, friend, a professional, a public servant, and a member of a certain organization all at the same time. *Role identities* are "self-conceptions, self-referent cognitions, or self-definitions that people apply to themselves as a consequence of the structural role positions they occupy" (Hogg et al. 1995 p. 256). In other words, role identities are the interpretations that individuals bring to roles or positions they are holding in society. *Roles* in this context can be seen as "cultural expectations tied to social positions in the social structure that actors try to meet" (Burke and Stets 2009, p. 39). The role concept in identity theory shows strong conformities with people's social identity as defined by social identity theory. From the perspective of social identity theory, individuals "are perceived as, are reacted to, and act as embodiments of the relevant in-group prototype rather than as unique individuals" (Hogg et al. 1995, p. 261). By researching how individuals give meaning to the professional role they hold, we learn more about how the professional interprets his or her professional role and which impact on decision making may be expected. Based on this, the first hypothesis is as following:

H1: *Decision making is influenced by professional role identity (the way how individuals interpret their professional role).*

Public service motivation

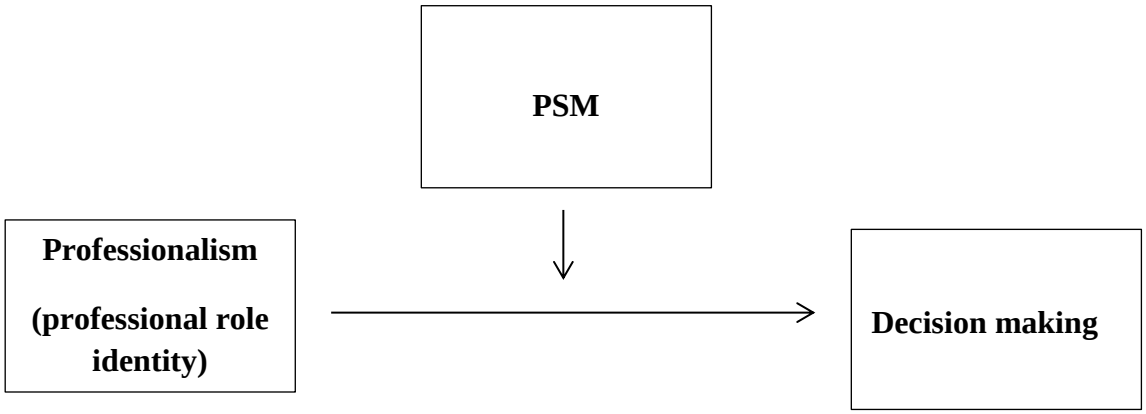
Since Perry and Wise (1990) provided the first definition of PSM - PSM is 'a predisposition to respond to motives grounded primarily or uniquely in public organizations' (p. 368) - several different definitions of PSM have been published (see e.g. Brewer and Selden 1998; Perry and Wise 1990; Rainey and Steinbauer 1999). In spite of this definitional plurality, what unifies all definitions is the idea of 'meaningful public service' or serving the community implying that PSM and public interest are inherently related.

A large body of research exists treating PSM as an independent variable. For example PSM has been associated with job satisfaction, (Bright 2008; Wright and Pandey, 2008) organizational commitment (Camilleri 2006; Crewson 1997; Leisink and Steijn 2009), and turnover intentions (Bright 2008; Naff and Crum 1999). Recently, scholars highlighted the fact that relationship between PSM and performance might be more complex than initially thought, leading to a new line of research which includes contextual factors into the analysis of the PSM-performance relationship (Bright 2007; Wright and Pandey 2008). Another line of research focuses on the antecedents of PSM such employee-leader relations, job characteristics (Camilleri 2007) and organizational antecedents (Giauque *et al*. 2013).

Despite this extensive quantitative research on PSM, insight into the meaning of PSM and into how individuals actually put their PSM into practice, is still limited. We cannot be sure about what kind of behavior can be expected simply from knowing that somebody is highly public service motivated. This can be explained by the central aspect of public service motivation, namely the 'public interest', being a very elusive concept. Following Bozeman (2007), there is little agreement on what the public interest exactly. Similarly, Rainey (1982) points out that "there are as many ways to conceive of public service as there are to conceive of the public interest" (p.289). It seems that there no such thing as 'the one and only public interest', but everybody has her or his own interpretation of the public interest. Consequentially the questions raises: Does being public service motivated imply to support efficiency, responsibility, democracy, integrity, transparency, or responsiveness? Following Van der Wal et al. (2011b), these public values are potentially conflicting, thus potentially forcing individuals to choose one above the other. In order to reduce this lack of knowledge, we argue that it is necessary to complement PSM with other concepts and theories that provide more insight into the meaning of the public interest for an individual. Only if we address the public interest as a context-dependent interpretation rather than an ideal, and if we gain insight into what it means to an individual to serve the public interest in a specific situation, we can say something about the actual effect of being public service motivated.

We argue that through combining the concept PSM with the concept professional role identity, the meaning what it means to score high on PSM is clarified. As pointed out earlier, the public interest is an integrated aspect of PSM by definition. Individuals who are highly public service motivated are committed to the public interest (Vandenabeele, 2008). We expect that a high level of PSM will drive individuals to make decisions that are consistent with their interpretation of what it means to serve the public interest in a specific situation. In contrast, individuals who scores low on PSM, will more easily adhere to a pragmatic solution that might involve trading off one's personal interpretation of the public interest. For example, a highly public service motivated teacher who interpretes sees helping disadvateged students as an important aspect of her professional role is more likely to work long ours than a teacher scoring low on PSM. Put it differently, we expect highly public service motivated individuals to behave more consistent with their interpretation of what it means to serve the public interest when holding a specific role than individuals who score low on PSM. The leads us to the second hypothesis:

H2: PSM moderates the relationship between professional role perception and decision.



2. METHODOLODICAL PART

Sample and procedure

The Dutch Food and Safety Authority (NVWA) is the only organization in the Netherlands where veterinarian inspectors are employed. A web-based questionnaire was disturbed to all veterinarian inspectors working at the division Veterinary & Import in the summer of 2013. We focus on veterinarian inspectors working at this division since they present a critical case

to be studied if we want to increase our knowledge of how individual interpretations of the professional role influence decision making. Veterinarian inspector dispose of a lot of autonomy. The NVWA encourages its employees to 'inspect with mind and hart' or to enforce 'soft if possible, and strict if necessary', indicating the complexity and professional discretion inherent in their work (Yearbook NVWA 20012).

In order to ensure a high response-rate, the questionnaire was accompanied by a short cover letter, signed by the head of the division, which emphasized the independent and autonomous character of this study and the importance to participle. In total, N=403 employees were addressed. 269 respondents returned the questionnaire. Respondents who completed less than 30% of the questions were excluded from the analysis yielding a total response of 64% (N=258).

Following common practice (Pandey and Stazyk 2008, p. 102), three socio-demographic characteristics are included as control variables; namely position, age, and gender. Educational level is not included as an academic degree in veterinary medicine is a requirement to be become a veterinarian inspectors. Next to this, we also included the thee controls tenure, type of employment contract (practitioner or 'regular' veterinarian inspector[3]), and additional employment as veterinarian (yes or no) because they provide specific characteristics of this case. Proactivity is included as final control variable as proactive behaviour is commonly associated with successful adaption of organizational values within sociological literature (Ashford and Black, 1995). In Table A1, the descriptive statistics of the control variables of the respondents are summarized. Most respondents are veterinarian inspectors without specialization or supervisory responsibility (55 %); 63 % are men and 37 % are female; the largest age group is between 55 and 65 years old; 33 % work as practitioners on call and 67 % are employed 'regular' veterinarian inspector. The sample can be considered to be representative of the total population of veterinarian inspectors in the Dutch food safety authority.

[3] Next to veterinarian inspectors employed as civil servants, the NVWA also employs so-called *practitioners*. Practitioners have comparable job responsibilities as 'regular' veterinarian inspectors. What makes this group of employees different are their terms of employment. They work for the NVWA on call and, besides that, also have a different souce of income. Throughout the paper, when we refer to veterinarian inspectors, we relate to both 'regular' veterinarian inspectors and practitioners.

Measurements

The instruments used to measure the constructs included in this study are summarized in Table 3 (section 3). The measurement's Cronbach's α - used as an estimate of reliability - the standard deviations (SD), and means are provided. All items were measured using a five point Likert scale (ranging from agree to disagree). In the Appendix (Table A2), a complete list of all items used in this study can be found. The original Dutch formulation of the items may be provided from the corresponding author on request.

In order to deal with construct or factorial validity, two factor analytic methods are performed; exploratory and confirmatory factor analysis. Construct validity is an approach to assess if an applied measurement instrument produces scores that seem to measure the intended construct and its underlying dimensions (Dooley, 2001). The construct validity of the instrument measuring professional role identity is assessed by exploratory factor analysis since the measurement instrument is newly developed and has not been tested before. The instrument measuring PSM, in contrast, has frequently been verified in the past (e.g., Vandenabeele, 2008; Kim et al., 2012) and is highly theory driven. Therefore, confirmatory factor analysis (CFA) is used to assess the construct validity of PSM.

Public service motivation is measured by a modified version of Perry's original measurement scale (1996) which is shorter and cross-validated among 12 countries (Kim et al., 2012). As the Netherlands were part of this international study, the Dutch version of the PSM-scale could be obtained from the researchers. The pilot test, however, identified one items of the dimension self-sacrifice to cause confusion among the respondents (PSM_SS2: I believe in putting civil duty before the self).

Both indices of the CFA on our measurement of PSM did not meet the required threshold. For this reason, two items (item PSM_APS_4: It is important to me to contribute to the common good and item PSM_COM_ 2: I emphasize with others who face difficulties) with low factor loadings, were excluded from further analysis. As a result, both fit-indices increased, indicating that the adjusted model of PSM can be considered favourably (Table 1). The CFI value exceeds the cutoff score of .95 and the RMSEA is below .08 (RMSEA = 0.076 < .08; CFI = .954 > .95) suggesting that the modified PSM-measurement instruments has good construct validity.

Cronbach's α was tolerable good for both the overreaching concept PSM (α = .83) and its separate dimensions a*ttraction to public service*, c*ommitment to public values*, c*ompassion* and s*elf-sacrifice*. Only the dimension *commitment to public values* scored relatively low (α =

.56). Since Cronbach's α reliability coefficients depend on the number of items which measure a concept (Dooley, 2001) and 'commitment to public values' is addressed by only three items, we kept the dimension regardless the low α.

Table 1 Summary fit indices CFA

	CFI	**RMSEA**
PSM (original model)	.923	.121
PSM (modified model)	.954	.076
Cutoff criteria	>.95	<.08

No specific measurement instruments exists which captures the interpretations that professionals bring to their job. In order to assess the *professional role identity* of veterinarian inspector we had to develop a new instrument. Following research using identity theory (e.g., Reitzes and Burke 1980; Cast 2006; Stets and Burk 2005a), we developed a bipolar scale. This 15-items scale captures five different dimensions of professional role identity which are drawn from the findings of a qualitative pre-study. Based on 39 semi-structured interviews with veterinarian inspectors working at the NVWA and six days of participant observation, five different dimensions of professional role identity could be identified, namely *commitment to economic interest*, c*ommitment to animal welfare*, c*ommitment to public health*, e*nforcement* and c*loseness to the inspectee*. Each dimension is measured by a varying number of items ranging from two up to four. Respondents are asked to think of themselves as veterinarian inspectors and prompt to identify where they would place themselves between each bipolar statement. Put it differently, the developed items ask respondents to which degree they perceive the five dimensions as important aspects of their professional role. Examples of the items include 'strict enforcement of rules is the only way to reach your goals (willingness to enforce)' or 'it is important that veterinarian inspectors consider the economic interest of the meat processing industry (commitment to economic interest)'.

In Table 2, the results of the PCA are summarized. Before the results of the PCA can be analyzed to assess the construct validity of professional role identity, it is important to check whether the Kaiser-Meyer-Oklin test (KMO test) and the Bartlett's test of spericity meet the required criteria (Field, 2009). The KMO test indicates whether the sample is adequate to carry out the analysis. In this study, the measure of sampling adequacy exceeds the required cutoff criteria of .5 (KMO test = .681). The Bartlett's test is significant (Bartlett's test =.000) indicating that variances of the populations from which different samples are drawn are equal (homogeneity of variances). The results of the PCA indicate that the factors approximately correspond with the expected aspects of professional identity (commitment to

economic interest, commitment to animal welfare, commitment to public health, enforcement and closeness to the inspectee). Only one items of the dimension enforcement (Enforce3) is slightly beyond the rule of thumb for establishing what can be considered as good factor loading coefficient. The factor loading is smaller than .3. Furthermore, item AW3 (I am willing to deviate from rules to safeguard animal welfare (For example, transporting boars and sows in one truck to keep them quite)) shows low factor-loading on Factor 2. For this reason, item AW 3 is excluded from further analysis.

The reliability of the separate dimensions of professional role identity is rather low (see Table 3); especially the dimension commitment to economic interest (Cronbach's α of .50). Therefore, it deserves closer attention. Further research of the two items "If rule enforcement implies serious financial damage for the individual I have to inspect, I find it difficult to enforce rules (ECO1)" and "Sometimes, I deviate from the rules in order to reduce the economic damage of the individual I have to inspect (ECO2)" shows that they together form a "cumulative scale" instead of a scale of correlated items. In other words, finding it difficult to enforce rules if this implies a serious financial damage is a precondition for deviating from the rules. Following Embretson and Reise (2000), if scales are cumulative they cannot be assessed by Cronbach's α. Rather, they need to be analyzed using nonparametric item-response theory for polychromous items. The scale of the dimension commitment to economic interest has a homogeneity of H = 0.34, which acceptable according to Schuurman (2003). For this reason, we combine the ECO1 and ECO2 and use their sum score as instrument to measure the professional role dimension commitment to the economic interest.

Taking into account that Cronbach's α reliability coefficients depend on the number of items which measure a concept (Dooley 2001) and the number of items used to measure the different dimensions of professional role identity only varies from 2 up to 4, the Cronbach's α of the other dimensions of professional role identity - varying between .61 and .66 - are considered to be tolerable acceptable.

Table 2 Results of PCA

	Factor				
	1	2	3	4	5
Eco1	,590	-,094	,013	-,264	-,012
Eco3	,551	-,095	,130	-,235	,063
AW1	,392	,277	-,423	-,067	,424
AW2	,173	,350	-,690	,201	-,160
AW3	,588	,067	,042	,205	-,263
AW4	,293	,522	-,502	,209	-,158
PH1	,085	,770	,315	,040	-,188
PH2	,022	,513	,538	-,246	-,310
PH3	-,005	,571	,368	,010	,553
Enfore1	,490	-,339	,252	,459	-,200
Enforce2	,560	-,092	,209	,464	,366
Enforce3	,669	-,042	,199	,267	,002
Close1	,667	-,044	-,013	-,416	-,138
Close2	,498	-,102	-,147	-,580	,088

+ excluded from further analysis
Rotation: Varimax

Decision making

Following research on ethical decision making (Maesschalck 2004), decision making in this study is measured through three dilemmas. These dilemmas have been developed by the researchers and were based on the same qualitative study mentioned above. Therefore, the situations are highly realistic and present real-life problems frequently encountered by veterinarian inspectors. The aim was to develop dilemmas where the three core values of veterinarian inspectors – *public health, animal health/welfare, and economic interest* - are in conflict which each other. The resulting dilemmas are presented below. The original Dutch formulation of the dilemmas may be provided from the corresponding author on request. In Dilemma 1, a conflict exists between economic interest and public health. In Dilemma 2, economic interest and animal welfare are conflicting. In dilemma 3, there is a clash between public health and animal welfare.

According to Wimbush et al. (1997), specific problems increase the likelihood of social desirability because respondents might suspect the employing organization to use the survey to investigate how employees behave in conflict situations. We hoped to counter this effect by strongly emphasizing in the cover letter that anonymity and confidentiality is guaranteed.

Dilemma1: Economic interest versus public health
An employee of a slaughter house is calling you in the afternoon to do a post-mortem inspection. It turns out that one of your colleagues overslept this morning. The stableman had started the slaughtering already without waiting for the ante- mortem inspection by a veterinarian inspector to be done. You are a little surprised because usually, the slaughterhouse sticks to the rules. By the time you arrive at the slaughterhouse. 15 cattle have been slaughtered without ante-mortem inspection. What are you going to do?

1) I certify all cattle
2) I disqualify the cattle
3) I postpone the decision until I talked to my supervisor
4) I do something different, namely….

Dilemma 2: Economic interest versus animal welfare
In a poultry slaughterhouse where you have to do an inspection, an old-fashioned and animal-unfriendly machine is still in use unloading all the chicken at the same time. Official documents state that animals have to be unloaded as horizontal as possible. However, at this slaughterhouse, all animals are falling on top of each other. This increases the risk of injury and suffering. You are pretty sure that the large number of broken wings is caused by the old-fashioned machine and not by something else. You want to do something about this, but you know that colleagues of yours did not consistently enforce the rules in the past. Stopping the production process implies serious financial damage. What are you going to do?

1) I do not do anything
2) I postpone the decision until I talked to my supervisor
3) I make a written report
4) I stop the production process
5) I do something different, namely…….

Dilemma 3: Public health versus animal welfare
At the slaughterhouse a cattle is trucked. You assume that the information about vaccinations is not correctly reported. Next to this, it also turns out that the animal's paw is fractured. The truck driver explains that the fracture must have happened on the way to the slaughterhouse. but it is not clear by just looking at the animal whether this is the true or not. What are you going to do?

1) I allow to shoot and slaughter the animal
2) I order to slaughter and disqualify the cattle
3) I order to shoot and slaughter the cattle and try to antedate the fracture's date so I can maintain order if necessary
4) I order to shoot and slaughter the cattle and make my decision based on the additionally inquired vaccination information
5) I postpone the decision until I talked to my supervisor
6) I do something different, namely ……

3. RESULTS

Descriptive statistics of the independent variables PSM and professional role perception

Table 3 provides evidence of veterinarian inspectors being highly public service motivated. The mean score of PSM of veterinarian inspectors is 3.78 which is higher than the mean score of PSM found by a national survey of Swiss civil servants (Giauque et al. 2013) and Dutch

civil servants working in the subsector public administration, public security, defence, education, and academic hospitals (Leisink and Steijn 2009). The means of three dimensions (attraction to public service, commitment to the public interest, compassion) are clearly above 3,5 (3 is the scale's centre) as well. Only the dimension *self-sacrifice* is a little lower (3.37). All items are well distributed varying from .40 up to .61.

The descriptive statistics of the different dimensions of the construct *professional role identity* are varied. The mean score of the dimension *commitment to public health* is highest (3.60). The dimensions *commitment to economic interest* scores is lowest (2.46). The three remaining dimensions *commitment* to *animal welfare*, *closeness to the inspectee*, and *willingness to enforce* are in between. The standard deviations of the different dimensions of the concept professional role identity are relatively large varying between .67 and .91.

Table 3 Descriptive statistics measurement instruments

Construct	**No of items**	**Cronbach's α**	**Mean**	**SD**
PSM	12	.83	3.78	.40
Attraction to public service	3	.58	3.84	.48
Commitment to public values	3	.56	3.81	.40
Compassion	3	.60	3.37	.51
Self-sacrifice	3	62	3.37	.61
Professional role identity	14	.64	3.26	.38
Commitment to economic interest	2	.48[4]	2.46	.67
Commitment to animal welfare	3	.60	3.32	.66
Commitment to public health	3	.61	3.60	.62
Willingness to enforce enforcement	3	.66	3.04	.94
Closeness to inspectee	2	.61	2.96	.81

In Table 4 the descriptive statistics of the variable decision making are summarized. First, the last response category ('I do something different. namely…') is coded. If the answer was in line with one of the other response categories, the answer was recoded accordingly. If this was not the case, the reactions were either put together as a new response category (provided that more than 10 individuals gave the same answer) or were coded as missing. The same is true for existing response categories that count less than 10 reactions as these categories are too small to perform statistical analyses with (Hosmer and Lemeshow, 2000)

[4] See section 2 for why we held on to this construct regardless the low alpha

Table 4 Descriptive statistics of dependent variable

	No	%
Dilemma 1		
I disqualify the cattle	128	50
I postpone the decision until I talked to my supervisor	98	38
Missing	32	12
N	258	
Dilemma 2		
I postpone the decision until I talked to my supervisor	167	64
I make a written report	25	10
I stop the production process	25	10
Missing	41	16
N	258	
Dilemma 3		
I order slaughter and disqualify the pork	14	6
I order to shoot and slaughter the pork and try to antedate the fracture's date so I can maintain order if necessary	59	23
I order to shoot and slaughter the pork and make my decision based on the additionally inquired vaccination information	94	36
I order to shoot and slaughter the pork, try to antedate the fracture's date so I can maintain order if necessary AND make my decision based on the additionally inquired vaccination information	54	21
Missing	37	14
N	258	

In Dilemma 1, after excluding response categories which were less than 10 times chosen, the number of reactions is approximately balanced between the two remaining response categories. 57 % of the respondents indicate that they would slaughter the animals immediately. 47 % of the respondents answer that they would postpone the decision and talk to their supervisor first.

In Dilemma 2, one response category is dominant. More than 75 % of the respondents indicate that they would postpone the decision until they had contact with their supervisor. The remaining two response categories are approximately equally strong represented. 12 % of the respondents indicate that they would follow the rules and make a written report. 13 % of the respondents choose the most drastic measure. They indicate that they would disrupt the production process.

In Dilemma 3, the remaining categories vary most regarding the quantity of how often they are chosen. Respondents most often indicate (36 %) that they would slaughter the animal and wait for additional information about the vaccination of the animal before they make a decision. 23 % of the respondents would slaughter the animal, too. However, they would not wait for additional vaccination information but rather investigate where the suffering of the animal originates from. Next to this, there is also a relatively large group of individuals who would do both; waiting for additional information and antedate the animal's

suffering (21 %). Only 9 % of the respondents indicate that they would apply serious penalties by destructing the animal right away.

Logistic regression analyses: testing of Hypothesis 1

Two response categories are given in Dilemma 1. Therefore, we performed a binary logistic regression analysis. In Dilemma 2 and 3, the respondent can choose between more than two response categories. Multiple logistic analysis is performed to investigate decision-making in these two dilemmas.

Binary logistic regression analysis: Dilemma 1

Before the results of the binary regression analysis are presented, it is checked whether the logistic regression model provides a good fit with the observed data. The Hosmer-Lemeshow (HL test) test and the Omnibus test of model coefficients indicate the extent to which the new model provides better fit than the 'null model' without predictor(s). If the result of the HL test is not significant. the model can be considered to have adequate fit (Lammers et al. 2007). Table 5 summarizes the results of the binary regression analysis applied to Dilemma 1. Next to the *Logits* (the logistic regression coefficients (B)) and the *odds ratio* (Exp(B)), the HL test and Nagelkerke R Square are provided. The Nagelkerke (pseudo) R square can be used as an indicator of the effect size of the independent variable (Lammers et al. 2007).

The logit models show that the dimensions *commitments to animal welfare. commitment to public health and enforcement* have no significant effect on decision making in Dilemma 1. A one unit change in the independent variables *commitment to economic interest* and *closeness to the inspectee*, however, increases the likelihood to decide to postpone the decision and talk to the supervisor first (commitment to economic interest (Exp(B) = 1.53; p = .036 < .05; closeness to the inspectee (Exp(B) = 1.47; p = .036 < .05). This means, if veterinarian inspectors think that considering the economic interest is an important aspect of their work and that it is important to keep the inspectees close, the chance increases that they postpone their decision until they have talked to their supervisor.

Table 5 Results of binary regression analysis (Dilemma 1)

	HL test		Omnibus Test of Model Coefficients		Nagelkerke R	B	Exp(B)	Sig.
	Chi-square	Sig.	Chi-square	Sig.				
Commitment to the economic interest	2.992	.701	5.177	.023*	.030	.400	1.492	.025*
Constant						-1.227	.293	.006
Commitment to animal welfare	3.961	.555	2.322	.128	.014	.316	1.372	.130
Constant						-1.322	.267	.063
Commitment to public health	11.852	.037	.012	.914	.000	-.024	.976	.914
Constant						1.268	.845	.833
Willingness to enforce	1.450	.919	.460	.498	.003	-.098	.907	.498
Constant						-.001	.999	.999
Closeness Inspectee	9.169	.557	.4.533	.033*	.027	.363	1.473	.036*
Constant						-1.372	.253	.011
PSM	11.724	.162	2.580	.108	.015	.558	1.746	.111
Constant						-2.378	.093	.075

0 = I disqualify the cattle (reference category)
1 = I postpone the decision until I talked to my supervisor

In a next step, we include *gender*. *age*. *type of employment contract*. *additional employment as veterinarian*, *tenure*, *position*, *team*, *and proactive behavior* into the analysis in order to control for alternative explanations of decision-making. The results of this second model (for more information, see Table A3 in the Appendix) show that the effect of *economic interest* and *closeness to the inspectee* remain significant (Closeness to the inspectee: Exp(B) = 1.635; p = .017 < .05; Economic interest: Exp(B) = 1.807; p = .010 < .05). The two control variables which have a significant effect on decision making in Dilemma 1 is gender and age. Women are 3 times more likely than men (Exp(B) = 3.009) to postpone their decision and contact the supervisor first than to disqualify the cattle. The opposite is true for the effect of age. A one unite change of the variable age implies that there is an decrease in the probability that respondents postpone the decision compared to disqualifying the cattle right away. Generally speaking, Table A3 provides evidence that the dimensions closeness to the inspectee - together with the controls - explains 13 % of the variance in the independent variable ((pseudo (R) = .131). Commitment to economic values - together with the controls - explains 14 % ((pseudo (R) = .141).

Multinomial logistic regression analysis: Dilemma 2 and 3

Firstly, we investigate whether the 'new model', the model that includes the independent variable, can be considered to have good fit. This information is provided by the Likelihood Ratio Test. The test is based on the ratio, which expresses how many times more likely the data are under the 'new model' compared to the basic '0-model'. In Table 6 en 7, the results

of the multinomial regression analysis are summarized for Dilemma 2 and 3. Next to Likelihood Ratio Test, the logits, odds ratios, and the Nagelkerke (pseudo) R are provided. Again, each dimension of the construct professional role identity is tested separately.

In dilemma 2, again, the two dimensions *commitment to the economic interest* and *closeness to the inspectee* have a significant effect on decision making. If veterinarian inspectors think that safeguarding the economic interest is an important aspect of their work. the probability increases that they postpone the decision until they talked to their supervisor compared to the response option 'I stop the production process' (Exp(B) = 2.4; p = .013 < .05). The same is true for veterinarian inspectors who think that it is important to keep inspectees close (Exp(B) = 1.8; p = .019 < .05). A one unit change in the independent variables *closeness to the inspectee*. increases the likelihood to postpose the decision with reference to disrupt the production process. The other dimensions of professional role identity dimensions have no significant effect in decision making.

Table 6 Multinomial Logistic Regression Analysis (Dilemma2)

In a second step, controls are added to the model. The results of this model are summarized in Table A4 in the Appendix. The effect of *commitment to the economic interest* and *closeness to the inspectee* remains significant. Control variables that have a significant effect on decision making are *type of employment contract* and *position.* Respondents who work as veterinarian inspector (compared to practitioners) and who hold a position without any supervisory responsibility (compared to veterinarian inspectors who are also company inspectors) are much more likely to *write a report* compared to *stopping the production process*. Generally speaking, Table A4 provides evidence that the dimensions closeness to the inspectee - together with the controls - explains 22 % of the variance in the independent variable ((pseudo (R) = .223). Commitment to economic values - together with the controls - explains 23 % ((pseudo (R) = .229).

In dilemma 3, the only dimension of the construct professional role perception that has a significant effect on the decision making is *commitment to public health* (see Table 7). If individuals view safeguarding the public health as an important aspect of their work, the probability decreases that they slaughter the pork and try assess the exact date of the fracture compared to 'slaughtering and disqualifying the animal'. The same is true for the response category 'I order to shoot and slaughter the pork and make my decision based on the

additionally inquired vaccination information'. Put it differently, if respondents score higher on commitment to the public health. they become more likely to slaughter and disqualify the animal right away.

Table 7 Multinomial Logistic Regression Analysis (Dilemma3)

Dilemma 3 is also tested a second time in order to control if the findings are possible confounded by third variables. Table A5 in the Appendix shows that the two control variables *type of employment contract* and *team* have a significant effect on decision making. Compared to practitioners, 'regular' veterinarian inspectors are 8 times more likely to choose the response category *I order to shoot and slaughter the pork. try to antedate the fracture's date so I can maintain order if necessary AND make my decision based on the additionally inquired vaccination information* with reference *to I order slaughter and disqualify the pork* than practitioners (Exp(B) = 8.068). Individuals of the team slaughtering houses are even 30 (Exp(B) = 30.428) times more likely to slaughter the pork and try assessing the exact date of the fracture than members of the team import. Generally speaking, Table A5 provides evidence that the dimensions commitment to economic values closeness - together with the controls - explains 25 % of the variance in the independent variable ((pseudo (R) = .254).

Overall, the results provide some support for the hypothesis that decision making in dilemma situations is influenced by the way individuals interpret their professional role (H1). Even after controlling for a large number of effects, the dimensions *commitment to conomic interest* and *closeness to the inspectee* are related to the decision 'I postpone the decision until I talked to my supervisor' in Dilemma 1 and 2. The dimension *public health* in related to the decision '*I slaughter and disqualify the pork'*. The dimensions *enforcement* and *commitment to animal health* do not have an impact on decision making in situations where different values are clashing.

Analysis of moderating effect: testing Hypothesis 2

Hypothesis 2 'PSM moderates the relationship between professional role identity and decision making in dilemma situations' is tested by including PSM as a moderator into the logit models which are discussed in section 5.3.1. In the Appendix, the results of the logistic regression analyses testing for a possible interaction effect of PSM can be found. Table A6 describes the results of the moderator analyses applied to the relationship between the two dimensions of professional role identity which showed to have a significant effect in the

previous analyses - closeness to the inspectee and commitment to economic interests - and decision making in Dilemma 1. Tables A7 does the same for decision making in Dilemma 2. In Table A8, the moderator effect of PSM on the relationship between commitment to public health and decision making in Dilemma 3 is presented.

Interestingly, the results reported in Table A6, A7, and A8 fail to provide any support for Hypothesis 2. PSM has no direct effect on decision making and it neither moderates the relationship between professional role identity and decision making in any of the three dilemma situations. This is true for both, the dimensions of professional role identity that had a significant effect on decision making in the previous analyses and for the dimensions which had no significant effect on the dependent variable (commitment to animal welfare and enforcement)[5].

4. DISCUSSION

Measuring PSM and professional role perceptions among Dutch veterinarian inspectors

Applying the measurement of PSM, all four dimensions of PSM could be reproduced and the reliability of all dimensions was tolerable acceptable. It seems that the concept PSM is a valid one in the context of Dutch veterinarian inspectors. However, there are some restrictions related to this conclusions which have to be pointed at. Based on a pilot study and the the results of the conformatrory factor analysis, three items of three different dimensions had to excluded from the analysis ('ATPS4: It is important to me to contribute to the common good', 'PSM_COM2: I empathize with other people who face difficulties', PSM_SS4: I believe in putting civic duty before self). This implies that we are not dealing with a problem of too many dimensions. Rather, attention should be paid to the question whether the formulation of the items is suitable for every context. Veterinarian inspector are very down-to-earth and pragmatic. This might explain the fact that they find it troublesome to identify with items which conain woolly words such as 'the common good (PSM_ATPS4)' and 'civic duty (PSM_SS4)'.

[5] The results of the moderator effect of PSM on the relationship between the role identity dimensions without significant effect on decision making in the previous analysis (commitment to animal welfare and enforcement) are not included in the Appendix. The results are provided by the researchers on request.

Another issue that needs further consideration is the concept professional role identity. The results of the principal component analysis reproduced the five factors that had been expected by the researchers based on a qualitative pre-study. However, the reliability coefficients Chronbach's α are low. As mentioned above, this low reliability might be explained by the limited number of items measuring the different dimensions of professional role identity. Nevertheless, measurements with low reliability run the risk of underestimating the relationships between the constructs under study (Dooley, 2001). This implies that we might have overlooked the effect of certain dimensions of professional role identity as they did not have an statistically significant effect on decision making. Further research should address this issue.

Professional role perceptions and decision making by Dutch veterinarian inspectors

The results of the logistic regression analyses show that three out of the five dimensions of professional role identity have a significant effect on decision making; commitment to the economic interest, closeness to the inspectee, and commitment to public health. In the first two dilemmas, individuals who perceive safeguarding the economic interest and keeping close touch with the inspectee as important aspects of their job are more likely to postpone their decision in situations where the economic interest is clashing with either animal welfare or public health than to take strict measures and put the inspectee under pressure.

This means, even individuals who score high on economic interest and closeness to the inspectee do not decide to certify all cattle (Dilemma 1) or to do nothing (Dilemma 2), which obviously would have been the most logical decision in terms of safeguarding economic values and keeping good touch with the inspectee. They do not act against mission of the organization. Rather, they postpone the decision; possibly to find other ways to act for the benefit of the individuals they are inspecting. This raises the questions if there are at all situations where veterinarian inspectors behave strongly against the mission of the NVWA. The date provides evidence that veterinarian inspectors vary with regard to the decisions they make. However, they do not seem to cross the line and act against the organizational objectives and values.

Other issues the respondents might react to by postponing the decision are, for instance, to put right the colleague's fault (Dilemma 1) or because there was no strict enforecement of rules in the past either (Dilemma 2). Unfortunaty, we cannot control for this additioanal motives in this study. This is a a limitation of the current study.

In Dilemma 3, a situation where public health and animal welfare are under pressure, only the dimension commitment to public health matters. Individuals who think that fostering public health is a very important aspect of their professional role are less likely to do additional medical research or to wait for additional information about the vaccination history of the animal than to disqualify the animal from the production process right away. At this point, strong conclusions are premature. However, the results give rise to the assumption that individuals who focus on public health in their work are very strict in avoiding any potential threat to public health.

Including control variables into the logistic regression models did not diminish the significant effect of the independent variables. In Dilemma 1, gender had a positive impact on the decision 'I postpose my decision until I talked to my supervisor'. This, however, is not the case in Dilemma 2 and 3 implying that it can not be concluded that women generally postpone their decisions more freuentially than men. The effect of the two variable *commitment to the economic interest* and *closeness to the inspectee* to postpone the decision might rather be context-dependent. In Dilemma 1 and 2 a lot of money is involved, potentially increasing the pressure on veterinarian inspectors. Postponing the decision and talking to the supervisor first might be considered as a way to cope with external threats. Another control variable which had a significant effect on decision making was 'type of employment contract'. In Dilemma 2 and 3, practitioners seemed to prefer response categories that had a direct effect. This might be explained by the pragmatic nature of veterinarian inspectors, or by the fact that practitioners are paid per performed tasked. They, therefore, might avoid activities that require a lot of (administrative) time. Interestingly, proactivity did not have a significant impact on decision making, implying that respondents with a proactive personality do not act more in line with organizational expectations than others.

Overall, it can be concluded that the way individuals interpret their professional role has an impact on decision making. Individuals who are sensitive to the economic interest and who believe that bonding with the inspectees is part of their job are more likely to postpone their decision than to take strict measures. The opposite seems to be true for individuals who consider safeguarding public health a crucial aspect of their work. These individuals seem very strict in the sense that they avoid any possibly treat to public health right away. Against expectations, we did not find any impact of the dimensions willingness to enforcement and

commitment to animal welfare on decision making. One possible explanation for this missing effect might be the low reliability of the measurement instrument. Another reason might be that the scores, in particular on enforcement, are effected by social desirability. The necessity of being a strict enforcer is one of the main messages that is continuously communicated by the NVWA. This makes it difficult to measure the 'real' level of the dimension willingness to enforce. Further research might benefit from addressing this issue.

PSM and decision making by Dutch veterinarian inspectors

The results of the logistic regression analyses fail to provide support for Hypothesis 2 claiming that PSM moderates the relationship between professional role perception and decision making. In none of the three dilemma situations, PSM has a direct effect. This provides support for our critique that we cannot be sure about how a highly public service motivated individual will behave as the menaing of PSM is role-dependent. However, the results neither provide support for the hypothesis that professional role identity can be used to give meaning to PSM. High scores on PSM do not strengthen the effect of professional role perception on decision making. One explanation might be that we did not asked respondents explicitly how they interpret their task to serve the public interest when occupying a professional role. Rather, we asked individuals how important it is to them that they can contribute to the values animal welfare, public health, economic interest, enforcement and closeness to the inspectee in their work as veterinarian inspector, assuming – based on our qualitative pre-study - that these values can be considered to be aspects of the public interest as related to the job of veterinarian inspectors. Such assumption might be premature. Future research might benefit from asking respondents directly what the public interest means to them when holding a particular role. By doing so, it can be ensured that the values the individuals mention to be important aspects of their (professional) role are the same values that they relate to the public interest.

5. CONCLUSION

Several conclusions can be drawn based on the results of this study. Professional role identity - the way individuals perceive how to do their job - helps to predict decision making. It can be concluded that including professionalism - referred to as professional role identity - into the study of decision making is useful to learn more about what drives daily work-related behaviors of public servants and to explain varying behavior of professionals with the same occupational background. Next to this, the result of this study provide new insights into the

impact of PSM in practice. It can be concluded that PSM has no explanatory value of decision making. This findings support our argument that PSM alone is not sufficient to explain certain behaviors. It seems to be necessary to combine PSM with other concepts that are clearer about the meaning of the public interest. Nest to this, the results of this study indicate that measurement instrument of PSM might not be universally applicable to individuals belonging to a specific professions without reconsidering the formulation of certain items. The professionals of this study - veterinarian inspector - seem to experience difficulties to identify with items relating to woolly words such as civic duty or common good. Finally, and against expectations, PSM did moderate the relationship between professional role identity and decision making. Next to the concluding remarks, the results of this study, therefore, also put forwards new questions. More research is necessary focusing on explaining the interaction of PSM, professional role identity and decision making.

References

Appleby, P. (1952). *Morality and administration in democratic government.* Baton Rouge: Louisiana State University Press.

Andersen, L.B. (2009). What determines the behaviour and performance of health professionals? Public service motivation, professional norms and/or economic incentives. *International Review of Administrative Sciences* 75(1), 79-97.

Andersen, L. B. and Serritzlew, S. (2012). Does public service motivation affect the behavior of professionals. *International Journal of Public Administration*, 25, 19-29.

Andersen, L.B. and Pedersen, L.H. (2012). Public service motivation and professionalism, *International Journal of Public Administration*, Vol. 35 No.1, pp. 46-57.

Ashford, S. J. and Black, J. S. (1996). Proactivity during organizational entry: The role of desire for control. Journal of Applied Psychology 81(2): 199.

Bollen, K.A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.

Bozeman, B. (2007). *Public values and public interest. Counterbalancing economic individualism*. Washington, DC: Georgetown University Press.

Brewer, B. (2004). Does administrative reform improve bureaucratic performance? A cross country empirical analysis. *Public Finance and Management,* 4**,** 399-428.

Brewer, G. A. (2008). Employee and organizational performance. In *Motivation in public management: the call of public service*, eds. J. L. Perry & A. Hondeghem, 136-156. Oxford: Oxford University Press.

Brewer, G. A. and Selden, S. C. (1998). Whistle Blowers in the Federal Civil Service: New Evidence of the Public Service Ethic. *Journal of Public Administration Research & Theory*, 8, 413-439.

Bucher, R. J and Stelling, G. (1977). *Becoming professional*. London: Sage Publications

Bright, L. (2007). "Does person-organization fit mediate the relationship between public service motivation and job performance of public employees?", *Review of Public Personnel Administration*, No. 27 No. 4, pp. 361-379.

Bright, L. (2008). Does public service motivation really make a difference on job satisfaction and turnover intention of public employees?, *American Review of Public Administration*, No. 38 Vol. 2, pp. 361-379.
Brown, D.J. (2006). *Confirmatory factor analysis for applied research*. New York: Guilford Press.
Bucher, R. J and Stelling, G. (1977). *Becoming professional*. London: Sage Publications
Burke, P. J. and Stets, J. E. (2009). *Identity theory*. Oxford: Oxford University Press.
Camilleri, E. (2007). Antecedents affecting public service motivation, *Personal Review*, Vol. 36 No. 3, pp. 356-277.
Clouder, L. (2003) Becoming professional: Exploring the complexities of professional socialization in health and social care, *Learning in Health & Social Care,* 2 (4), pp. 213–222.
Crewson, P. E. (1997). Public-service motivation: building empirical evidence of incidence and effect, *Journal of Public Administration Research and Theory*, Vol. 7 No. 4, pp. 499-518.
Davis, K. C. (1969). *Discretionary justice: A preliminary inquiry*. Baton Rouge, LA: Louisiana State University Press. Elliot, P. 1972. *The Sociology of Professions*. London: McMillan.
Dooley, D. (2001). *Social research methods*, 4th ed. New Jersey: Prentice Hall.
Evetts, J. (2003). 'The Sociological Analysis of Professionalism', *International Sociology*, 18, 2, 395-415.
Evettes (2006) Short Note: The sociology of professional groups. Current Sociology, 54, 133-143.
Fabrigar, L.R., Wegener, D.T., MacCallum, R.C. and Strahan, E.J. (1999). Evaluating the Use of Exploratory Factor Analysis in Psychological Research. *Psychological Methods*, 4(3), 272-299.
Flathman, R..E. (1966). T*he public interest: An essay concerning the normative discourse of politics*. New York: Penguin Books.
Field, A. 2000. *Discovering statistics using SPSS.* London: Sage publications Ldt.
Freidson, E. 2001. *Professionalism: The third logic*. Cambridge: Polity Press.
Graaf de, G. 2003. *Tractable Morality: Customer Discourses of Bankers, Veterinarians and Charity Workers*, PhD dissertation, Erasmus University Rotterdam, the Netherlands.
Giauque, D., Anderfuhren-Biget, S. and Varone, F. (2013). "HRM practices, intrinsic motivators and organizational performance in the public sector", *Personnel Management*, Vol. 42 No. 2, pp. 123-150.
Goodrick, E., Salancik, G. R. (1996) 'Organizational Discretion in Responding to Institutional Practices: Hospitals and Cesarean Births', *Administrative Science Quarterly* 41: 1–28.
Gould and Harris. (1996). Student Imagery of Practice in Social Work and Teacher Education: A DComperative Research Approach. *British Journal of Socoial Work, 26, 223-237.*
Gulick, L. Politics, Administration and the 'new deal', *Annals of the American Academy of Political Science*, 196, 55-66.
Graaf de, G. (2010). The Loyalties of Top Public Administrators. *Journal of Public Administration Research & Theory*, 21, 285-306.
Graaf de, G. 2003. *Tractable Morality: Customer Discourses of Bankers, Veterinarians and Charity Workers*, PhD dissertation, Erasmus University Rotterdam, the Netherlands.
Harris, J. (1998) Scientific management, bureau-professionalism, new managerialism: the labour process of state social work. *British journal of social work,* 28**,** 839-862.

Hogg, M. A., Terry, D. J. and White, K. M. (1995). A tale of two theories: A critical comparison of identity theory and social identity theory. *Social Psychology Quarterly, 58*(4), 255-69.

Kaiser, F.K. 1958. The varimax criterion for analytic rotation in factor analysis. *Psychometrika,* 23 (3), 187-200.

Kim, S., Vandenabeele, W., Wright, B.E., Andersen, L.B., Cerase, F.P., Christensen, P.K., Desmarais, C., Koumenta, M., Leisink, P., Liu, B., Palidauskaite, J., Perdersen, L.H., Perry, J.L., Ritz, A., Taylor, J. & De Vivo, P. (2012). Investing the structure and meaning of public service motivation across populations: Developing an international instrument and adressing issues of measurement invariance'. *Journal of Public Administration Research and Theory*. *23*(1), 79-102.

Lammers, J., Pelzer, B., Hendrickx, J. and Eisinga, R. (2007). *Categorische data anayse met SPSS: inleiding in logliniaiere analysetechnieken*. Assen: Van Gorcum.

Leisink, P. and Steijn, B. (2009). "Public service motivation and job performance of public sector employees in the Netherlands", *International Review of Administrative Science*, Vol. 75 No.1, pp. 35-51.

Lipsky, M. (1980). Street-level bureaucrats: dilemmas of the individual in the public services. Russell Sage Foundation.

Maesschalck (2004) Towards a public administration theory on public servants' ethics: A comparative study. Doctoral Thesis, Katholic University, Leuven, Belgium.

Mertens, F. 2011. *Inspecteren: Toezicht door Inspecties*. Den Haag: Sdu Uitgevers.O'Kelly, C. & Dubnick, M. (2005). Taking tough choices seriously: Public Administration and individual moral agency. *Journal of Administration Research and Theory,* 13(3), 393-415.

Maynard-Moody, S. and Musheno, M. (2000). State agent or citizen agent: two narratives of discretion. *Journal of public administration reserach and theory,* 10**,** 329-358.

Moynihan, D. P. and Pandey, S. K. (2007). The role of organizations in fostering public service motivation. *Public Administration Review, 67*(1), 40-53.

Naff, K.C. and Crum, J. (1999). Working for America: does public service motivation make a difference?, *Review of Public Personnel Administration,* Vol. 19 No. 1, pp. 5-16.

O'Kelly, C. and Dubnick, M.J. (2005). Taking tough choices seriously. Public administration and individual moral agency, Journal of Public Administration Research and Theory, 16(3), 393-415.

Lipsky, M. (1980). Street-level bureaucrats: dilemmas of the individual in the public services. Russell Sage Foundation.

Rainey, H. G. and Steinbauer, P.J. (1999). Galloping Elephants: Developing Elements of a Theory of Effective Government Organizations. *Journal of Public Administration Research & Theory,* 9**,** 1-32.

Pandey, S.K. and Stazyk, E. (2008). Antecedents and correlates of public service motivation*",* in Perry, J.L. and Hondeghem, A. (Ed.), *Motivation in public management: the call of public service*, Oxford University Press, Oxford, pp. 101-117.

Perry, J.L. (1996). Measuring public service motivation: an assessment of the construct reliability and validity, *Journal of Public Administration Research and Theory,* Vol. 1 No. 1, pp. 5-22.

Perry, J., L. (2000). Bringing society in: Toward a theory of public-service motivation. *Public Administration Research and Theory,* 10, 2, 471-488.

Perry, J. L. and A. Hondeghem. (2008). Motivation in Public Management: The Call of Public Service. Oxford: Oxford University Press.

Perry, J. L. and L. R. Wise (1990). The Motivational Bases of Public Service. Public Administration Review, 50, 367-373.

Pollitt, C. and G. Bouckaert. (2004). Public management reform: a comparative analysis. Oxford [etc.]: Oxford University Press.
Rainey, H.G. (1982). Reward Preferences among Public and Private Managers: In Search of the Service Ethic. *American Review of Public Administration,* 16**,** 288-302.
Rainey, H. G. (2003) Understanding and managing public organizations. San Francisco, Calif.: Jossey-Bass.
Roberts, J. & M. Dietrich (1999) Conceptualizing professionalism: Why economics needs sociology. American Journal of Economics and Sociology, 58, 977-998.
Schott, C., Steen, T. and Kleef Van. (2014) What does it mean and imply to be public service motaivated? *The American Review of Pubic Adminsitration.* (forthcomining)
Spicer, M.E. (2009). Value conflict and legal reasoning in public administration. *Administrative Theory and Practice,* 31, 537-555.
Stets, J. E. and Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly, 63*(3), 224-37.
Steen and Van der Meer 2011
Stryker, S. and Burke, P. J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly,* 63(4), 284-97.
Thompson, B. (2007). Exploratory and confirmatory factor analysis: Understanding concepts and applications. Washington, DC: American Psychological Association.
Vandenabeele, W. (2008). *Towards a public administration theory of public service motivation* (Unpublished doctoral dissertation). Katholic University of Leuven, Belgium.
Vandenabeele, W., Scheepers, S. and Hondeghem, A. (2006). Public service motivation in an International Comperative Perspective: The UK and Germany, *Public Policy and Administration*, 21(1), 13-32.
Van der Wal, Z., De Graaf, G. & Lawton, A. (2011a). Competing values in public management. *Public Management Review,* 13**,** 331-341.
Van der Wal, Z., De Graaf, G. & Van Montford, C. (2011b). Introductie themanummer goed bestuur. *Bestuurskunde, 2,* 2-11.
Williams, L.J., Vandenberg, R.J. & Edwardss, J.R. (2009). 12 Structural equation modeling in management research: A guide for improved analysis. *The Academy of Management Annals,* 3(1), 543-604.
Wimbush, J. C., J. M. Shepard & S. E. Markham (1997), "An Empirical Examination of the Relationship Between Ethical Climate and Ethical Behavior From Multiple Levels of Analysis." *Journal of Business Ethics,* 16: 1705-1716.
Wright, B. E. & Pandey, S. K. (2008). Public service motivation and the asssumption of a person-organization fit: Testing the mediating effect of value congurence. *Administration and Society, 40*(5), 502-521.
Yearbook, Nederlandse Voedsel- en Warenautoriteit (NVWA). 2012. *Jaarplan*, Den Haag.

Table 2 Multinomial logistic regression analysis (Dilemma 2)

		Likelihood Ratio Test		Nagelkerke R	B	Exp(B)	Sig.
		Chi-square	Sig.				
Commitment to the economic interest		4.804	.091	.029			
0	Constant				.408		.562
	Commitment to the economic interest				.657	1.930	.035
1	Constant				-1.209		.194
	Commitment to the economic interest				.541	1.717	.174
Commitment to animal welfare		1.700	.427	.011			
0	Constant				3.319		.005
	Commitment to animal welfare				-.400	.670	.224
1	Constant				1.739		.247
	Commitment to animal welfare				-.500	.606	.249
Commitment to public health		1.211	.546	.007			
0	Constant				.574		.640
	Commitment to public health				.369	1.447	.289
1	Constant				-1.473	1.517	.363
	Commitment to public health				.417		.363
Willingness to enforce		2.499	.287	.012			
0	Constant				.824		.490
	Enforcement				-.148	.547	.524
1	Constant				-.110		.944
	Enforcement				.209	.1.232	.502
Closeness inspectee		8.932	.011	.054			
0	Constant				.078		.919
	Closeness inspectee				.629	1.876	019
1	Constant				-.154		.875
	Closeness inspectee				.042	1.043	.904
PSM		.560	.756	.003			
0	Constant				3.409		.101
	PSM				-.396	.673	.462
1	Constant				1.614		.555
	PSM				-.424	.655	.553

0 = I postpone the decision until I talked to my supervisor
1 = I make a written report
2 = I stop the production process (reference category)

Table 3 Multinomial logistic regression analysis (Dilemma 3)

		Likelihood Ratio Test		Nagelkerke R	B	Exp(B)	Sig
		Chi-square	Sig				
Commitment to the economic interest		.813	.846	.004			
0	Constant				1.500		.129
	Commitment to the economic interest				-.025	.975	.948
1	Constant				2.390		.012
	Commitment to the economic interest				-.202	.817	.586
2	Constant				1.583		.11
	Commitment to the economic interest				-.096	.909	.805
Commitment to animal welfare		.485	.928	.002			
0	Constant				1.937		.218
	Commitment to animal welfare				-.131	.878	.773
1	Constant				2.767		.069
	Commitment to animal welfare				-.251	.778	.567
2	Constant				2.001		.207
	Commitment to animal welfare				-.183	.833	.690
Commitment to public health		8.262	.041	.041			
0	Constant				6.170		.001
	Commitment to public health				-1.285	.277	.009
1	Constant				5.222		.005
	Commitment to public health				-.892	.410	.058
2	Constant				4.030		.035
	Commitment to public health				-.714	.490	.145
Willingness Enforce		4.771	.189	.022			
0	Constant				.247		.803
	Enforcement				.379	1.461	.230
1	Constant				.1880		.042
	Enforcement				.008	1.008	.978
2	Constant				1.161		.233
	Enforcement				.058	1.059	.854
Closeness inspectee		.651	.885	.003			
0	Constant				.671		.539
	Closeness inspectee				.255	1.290	.483
1	Constant				1.485		.483
	Closeness inspectee				.141	1.151	.686
2	Constant				.721		.511
	Closeness inspectee				.215	1.239	.557
PSM		2.718	.437	.013			
0	Constant				4.126		.151
	PSM				-.705	.494	.343
1	Constant				4.569		.099
	PSM				-.699	.497	.328
2	Constant				1.832		.526
	PSM				-.125	.883	.867

0 = I order to shoot and slaughter the pork and try to antedate the fracture's date so I can maintain order if necessary

1 = I order to shoot and slaughter the pork and make my decision based on the additionally inquired vaccination information

2 = I order to shoot and slaughter the pork. try to antedate the fracture's date so I can maintain order if necessary AND make my decision based on the additionally inquired vaccination information

3 = I order slaughter and disqualify the pork (reference category)

Appendix

Table A1 Descriptive statistics of sample and population

	Sample	
	N	%
Position		
Veterinarian inspector (baseline)	141	55
Veterinarian inspector and company inspector[6]	68	26
Senior veterinarian inspector	42	16
Different[7]	7	3
Age		
<35	25	10
≥35 and <45	53	21
≥45 and <55	63	24
≥55 and <65	93	36
≥65	24	9
Gender		
Male	162	63
Female	96	37
Type of employment contract		
Veterinarian-inspector	174	67
Practitioner	84	33
Additional employment as veterinarian		
Yes	55	32
No	203	79
Tenure		
>5	18	7
≥5 and >10	102	40
≥10 and >20	54	21
≥20	84	32
Proactive behavior		
Low	43	17
Medium	169	67
High	38	15
Team		
Living animals	70	27
Slaughter houses (baseline)	152	59
Import	36	14

[6] The term company inspector refers the a veterinarian inspector that is responsible for the inspection at particular company

[7] For example trainees and senior inspectors

Table A2 Complete list of professional role identity items

Professional role perception scale
Commitment to the economic interest
Eco1: If rule enforcement implies serious financial damage for the individual I have to inspect, I find it difficult to enforce rules.
Eco2: It is important that veterinarian inspectors consider the economic interest of the meat processing industry.
Eco3: Sometimes I deviate from the rules in order to reduce the economic damage of the individual I have to inspect.
Commitment to animal welfare
AW1: I enforce rules stricter in cases where animal welfare is at risk.
AW2: For me, what motivate me the most in my work as veterinarian inspector is that I can do something for animals.
AW3: I am willing to deviate from rules to safeguard animal welfare (For example, transporting boars and sows with one truck to keep them quite). +
AW4: Safeguarding animal welfare is the most important value where I come in for in my work as veterinarian inspector.
Commitment to public health
PH1: For me, what motivate me the most in my work as veterinarian inspector is that I can safeguard public health.
PH2: If I had to choose. I think safeguarding public health is more important than safeguarding animal welfare.
PH3: Even in cases where there is no specific rule or regulation, if public health is at risk, I act.
Willingness to enforcement
Enforec1: Strict enforcement of rules is the only way to reach your goals (R)
Enforec2: Sometimes it is more important to enforce rules and regulations based on the spirit and not the letter of the law.
Enforec3: If you want to make a change, it is more important to convince people rather than to strictly follow the rules.
Closeness to the inspectee
Close: I find it difficult to act as a strict enforcer of rules and regulations if I know that the people I am inspecting have done their best to change things for the better.
Close: I find it difficult act as an strict enforcer of rules and regulations if I know the person I am inspecting personally.

+Excluded on basis of EFA
The original Dutch formulation of the dilemmas may be provided from the authors on request
(R) reversed

Table A2 Complete list of PSM items

PSM scale based on Kim et al. 2012
PSM_ATPS1: I admire people who initiate or are involved in activities to aid my community
PSM_ATPS2: It is important to contribute to activities that tackle social problems
PSM_ATPS3: Meaningful public service is important to me
ATPS4: It is important to me to contribute to the common good+
PSM_CPV1: It is important that citizens can rely on the continuous provision of public services
PSM_CPV2: It is fundamental that the interest of future generations are taken into account
PSM_CPV3: To act ethically is essential for public servants
PSM_COM1: I feel sympathetic to the plight of the unprivileged
PSM_COM2: I empathize with other people who face difficulties+
PSM_COM3: I get very upset when I see other people being treated unfairly
PSM_COM4: Considering the welfare of others is very important
PSM_SS1: I am prepared to make sacrifices for the good of society
PSM_SS2: I am willing to risk personal loss to help society
PSM_SS3: I would agree to a good plan to make a better life for the poor. even it costs me money
PSM_SS4: I believe in putting civic duty before self X

X excluded based on pilot + Excluded on basis of CFA

The original Dutch formulation of the dilemmas may be provided from the authors on request

Table A3 Results of binary regression analysis with control variables (Dilemma 1)

	B	**Exp(B)**	**Sig.**		**Exp(B)**	**Sig.**
Constant	27.066		.579	28.828		.559
Gender (0 = male)	1.051	2.860	.006	1.097	2.994	.004
Age	-.383	.682	.031	-.323	.724	.060
Type of employment contract (0 = VI)	.428	1.534	.318	.558	1.747	.189
Additional employment as veterinarian (0 = yes)	-.217	.805	.605	-.258	.772	.537
Tenure NVWA	-.015	.985	.542	-.016	.984	.520
Proactivity	.437	1.548	.109	.431	1.539	.108
Team						
Slaughterhouses vs Living animals	.312	1.366	.368	.428	1.534	.213
Slaughterhouses vs Import	.300	1.349	.532	.236	1.266	.613
Position						
Regular inspector vs senior inspector	.466	1.593	.320	.435	1.545	.353
Regular inspector vs company inspector	-.054	.948	.897	.013	1.013	.974
Economic interest				.571	1.771	.005
Closeness to inspectee	.491	1.635	.017			
	Omnibus Test Model Coefficients Chi-square 22.87, Sig .018* HL test Chi-square 5.904 Sig .658 Nagelkerke R .131			Omnibus Test Model Coefficients Chi-square 26.28, Sig .006* HL test Chi-square 9.85. Sig .275 Nagelkerke R .148		

0 = I disqualify the cattle (reference category)

1 = I postposte the decision until I talked to my supervisor

Table A4 Multinomial logistic regression analysis with control variables (Dilemma 2)

	B	Exp(B)	Sig.	B	Exp(B)	Sig.
I postpone the decision until I talked to my supervisor						
Constant	16.796		.843	-15.0		.857
Gender (0 = male)	.123	1.130	.842	.363	1.438	.565
Age	.192	1.212	.492	.206	1.229	.468
Type of employment contract (0 = VI)	-1.378	.252	.053	-1.28	.277	.071
Additional employment as veterinarian (0 = yes)	-1.152	.316	.101	-1.202	.301	.089
Tenure	-.007	.993	.869	.009	1.009	.831
Proactivity	.776	2.173	.075	.693	2.001	.110
Team						
Slaughterhouses vs. Living animals	-.684	.504	.192	-.561	.571	.273
Slaughterhouses vs. Import	-.868	.420	.235	-1.144	.318	.116
Positon						
Regular inspector vs. senior inspector	.015	1.015	.984	.013	1.013	.987
Regular inspector vs. company inspector	-.440	.644	.549	-.323	.724	.658
Commitment to the economic interest				.733	2.080	.029
Closeness to inspectee	.771	2.162	.019			
I make a written report						
Constant	-84.20		.443	-122.6	1.753	.261
Gender (0 = male)	.317	1.372	.698	.561	.711	.493
Age	-.324	.723	.376	-.342	.099	.354
Type of employment contract (0 = VI)	-2.657	.070	.005	-2.31	.204	.010
Additional employment as veterinarian (0 = yes)	-1.733	.177	.062	-1.588	1.066	.082
Tenure	.045	1.046	.410	.064	1.154	.244
Proactivity	.167	1.182	.774	.143	.577	.806
Team						
Slaughterhouses vs. Living animals	-.558	.573	.458	-.550	1.146	.458
Slaughterhouses vs. Import	.075	1.078	.931	.136	.800	.873
Positon						
Regular inspector vs. senior inspector	-.396	.673	.670	-.223	.108	.809
Regular inspector vs. company inspector	-2.231	.107	.033	-2.22	2.135	.033
Commitment to the economic interest				.759	1.753	.073
Closeness to inspectee	.350	1.419	.407			
	Likelihood Ration Test Chi-square 39.321 Sig .013* Nagelkerke R .223			Likelihood Ration Test Chi-square. 39.166 Sig. 014 * Nagelkerke R. 220		

I stop the production process (reference category)

Table A5 Multinomial logistic regression analysis with control variables (Dilemma 3)

	B	Exp(B)	Sig.
I order to shoot and slaughter the pork and try to antedate the fracture's date so I can maintain order if necessary			
Constant	31.249		.799
Gender (0 = male)	.150	1.162	.868
Age	.210	1.234	.576
Type of employment contract (0 = VI)	1.543	4.679	.118
Additional employment as veterinarian (0 = yes)	-1.157	.315	.175
Tenure	-.015	.985	.804
Proactivity	.456	1.578	.452
Team			
Slaughterhouses vs. living animals	.561	1.753	.479
Slaughterhouses vs. import	3.415	30.418	.004
Positon			
Regular inspector vs. senior inspector	.512	1.668	.638
Regular inspector vs. company inspector	.963	2.621	.423
Commitment to public health	-1.475	.229	.009
I order to shoot and slaughter the pork and make my decision based on the additionally inquired vaccination information			
Constant	114.133		.329
Gender (0 = male)	-.031	.969	.971
Age	.244	.946	.340
Type of employment contract (0 = VI)	1.438	4.211	.128
Additional employment as veterinarian (0 = yes)	-.309	.734	.696
Tenure	-.056	.946	.340
Proactivity	.545	1.725	.345
Team			
Slaughterhouses vs. living animals	.784	2.191	.311
Slaughterhouses vs. import	1.401	4.057	.138
Positon			
DummyP1 (Regular inspector vs. senior inspector)	.377	1.457	.716
DummyP1 (Regular inspector vs. company inspector)	-.004	.996	.997
Commitment to public health	-1.147	.318	.033
I order to shoot and slaughter the pork. try to antedate the fracture's date so I can maintain order if necessary AND make my decision based on the additionally inquired vaccination information			
Constant	142.905		.248
Gender (0 = male)	-.942	.390	.296
Age	.435	1.545	.256
Type of employment contract (0 = VI)	2.088	8.058	.044
Additional employment as veterinarian (0 = yes)	-.072	.931	.245
Tenure	1.111	3.036	.075
Proactivity	.478	1.613	.557
Team			
Slaughterhouses vs. living animals	3.051	21.138	.005
Slaughterhouses vs. import	.038	1.039	.972
Positon			
Regular inspector vs. senior inspector			
Regular inspector vs. company inspector	.220	1.246	.855
Commitment to public health	-.910	.402	.110
	Likelihood Ration Test Chi-square 56.838, Sig .006 Nagelkerke R .254		

I stop the production process (reference category)

Table A6 Logistic Regression Analysis with Moderator PSM (Dilemma 1)

	Omnibus Test of Model Coefficients		Nagelkerke R	B	Exp(B)	Sig.
	Chi- square	Sig.				
	8.222	.042	.048			
Economic interest_centr				.428	1.619	.021
PSM_centr				.686	1.986	.060
PSM_centr x Economic interest_centr				-.065	.937	.881
	8.512	.037	.050			
Closeness Inspectee_centr				.468	1.597	.025
PSM_centr				.662	1.938	.068
PSM_centr x Closeness Inspectee_centr				-.411	.663	.320
0 = I disqualify the cattle (reference category)						
1 = I postpone the decision until I talked to my supervisor						

Table A7 Logistic Regression Analysis with Moderator PSM (Dilemma 2)

	Likelihood Ration Test		Nagelkerke R	B	Exp(B)	Sig.
	Chi-square	Sig.				
Economic interest	8.159	.227	.050			
I postpone the decision until I talked to my supervisor						
Economic interest_cent.				.898	.729	.013*
PSM_cent				-.316	.729	.584
Economic interest_centxPSM_cent				.515	2.455	.540
I make a written report						
Economic interest_cent.				.684	.696	.134
PSM_cent				-.362	1.289	.629
Economic interest_centxPSM_cent				-.254	1.983	.812
Closeness inspectee	9.324	.156	.057			
I postpone the decision until I talked to my supervisor						
Closeness Inspectee_cent.				.587	1.799	.036
PSM_cent				-.110	.896	.850
Closeness Inspectee_cent xPSM_cent				.228	1.256	719
I make a written report						
Closeness Inspectee_cent .				-.021	.979	.954
PSM_cent				-.255	.775	.744
Closeness Inspectee_cent xPSM_cent				.290	.1336	.734

Reference category = I stop the production process

Table A8 Logistic Regression Analysis with Moderator PSM (Dilemma 3)

	Likelihood Ration Test		Nagelkerke R	B	Exp(B)	Sig.
	Chi-square	Sig.				
Public Health	10.553	.308	.052			
I order to shoot and slaughter the pork and try to antedate the fracture's date so I can maintain order if necessary						
Constant				1.628		.000
Public Health_cent.				-1.98	.302	.026
PSM_cent				.251	1.285	.772
Public Health _centxPSM_cent				-.868	.420	.372
I order to shoot and slaughter the pork and make my decision based on the additionally inquired vaccination information						
Constant				2.102		.000
Public Health_cent.				-.767	.169	.465
PSM_cent				.044	.203	.1.045
Public Heltah _centxPSM_cent				.997	.069	.369
I order to shoot and slaughter the pork. try to antedate the fracture's date so I can maintain order if necessary AND make my decision based on the additionally inquired vaccination information						
Constant				1.557		.000
Public Health_cent.				-.663	.515	.515
PSM_cent				.515	.1673	1.673
Public Heltah _centxPSM_cent				-1.014	.363	.363

I order slaughter and disqualify the pork (reference category)